

**REMARKS**

***Summary of the Amendment***

Upon entry of the above Amendment, Claims 1, 3, 6, 8, 18-22 and 24 will have been amended. Furthermore, new Claims 34-45 will have been added. Accordingly, Claims 1-7, 18-19, 21-23 and 34-45 are currently pending prosecution, while Claims 9-17 and 25-33 are withdrawn from consideration.

It is noted that Claims 3 and 20 have been amended only to conform the claims to the elected species; and Claims 6, 19 and 22-21 have been amended only to correct formal matters. Therefore, the aforementioned amendments have not been made to specifically overcome a rejection based upon prior art, and thus, should be considered to have been made for a purpose unrelated to patentability. Hence, no estoppel should be deemed to attach thereto amended Claims 6, 19 and 22-21.

By the present Amendment and Remarks, Applicant submits that the rejections have been overcome and respectfully requests reconsideration of the outstanding Office Action.

***Summary of the Office Action***

In the subject Office Action, Claim 1 is objected to for formal matters. Furthermore, Claims 1-5 and 18-21 are rejected under 35 U.S.C. § 102(b) as being anticipated. Additionally, Claims 6-8 and 22-24 are rejected under 35 U.S.C. § 103(a) as being unpatentable in view of art of record.

***Objection to Claims***

Claim 1 is objected to for formal matters because the phrase "to said" is written twice consecutively on line 13. Applicant has amended Claim 1 to delete the aforementioned duplicate of the phrase "to said". Accordingly, Applicant requests the Examiner to withdraw the objection to Claim 1 in the next Office Action.

***Traversal of Rejection under 35 USC § 102(b)***

Applicant respectfully traverses the rejection of Claims 1-5 and 18-21 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,593,174 to White [hereinafter "WHITE"].

The Examiner submits that WHITE teaches an interconnect including: first and second conductive transmission lines having tapered steps and the other edges are parallel in the same manner as the present invention (Claim 4, 20, 21); inherently the narrowing line width increases the impedance of the line as is a fundamental property of transmission lines (Claim 3); conductive wires are connecting the transmission lines at equally spaced intervals (i.e. terminals) (see Fig. 1) (Claims 2, 5, 19); ports ( $P_{out}$ ,  $P_{in}$ ) are provided to the transmission lines (Claim 1); and are inherently the interconnection functions equivalently to the present invention, especially since it structurally the same as the presently claimed structure (Claim 18).

**Applicant's Independent Claim 1 (and Dependent Claims 2-5)**

Applicant's independent Claim 1 as amended recites, *inter alia*, [a] distributed interconnect *between two separate substrates* comprising: a first substrate; a second substrate; a first conductive transmission element formed on said first substrate, . . . ; a second conductive transmission element formed on said second substrate, . . . . Applicant respectfully submits that WHITE does not teach the aforementioned features.

As best understood, WHITE teaches a solid state amplifier which utilizes a pair of tapered transmission lines; however, the WHITE amplifier device is formed on a single dielectric substrate 12. Moreover, in WHITE, there are no teachings or suggestions that the WHITE amplifier is intended to be used as an interconnect between substrates.

On the other hand, Applicant's invention recited in independent Claim 1 is a device which is utilized as an interconnect for communicating electrical signals, such as microwaves, between substrates 20, 22. Otherwise, there is no reason to use Applicant's distributed interconnect invention (see Fig. 2) considering that the bondwires tend to be subject to unwanted inductance as is mentioned as a disadvantage of other prior art solutions in the Background Section of the subject application.

Since WHITE fails to disclose the above-noted features of the present invention, Applicant submits that WHITE fails to disclose each and every recited feature of the present invention as recited in independent Claim 1.

Accordingly, Applicant respectfully submits that the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b) and that the rejection of Claim 1 is improper and should be withdrawn.

Further, Applicant submits that Claims 2-5 are allowable at least for the reason that these claims depend from allowable independent Claim 1 and because these claims recite additional features that further define the present invention.

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of dependant Claims 2-5 under 35 U.S.C. § 102(b) and indicate that these claims are allowable.

*Applicant's Independent Claim 18 (and Dependent Claims 19-21)*

Applicant's independent Claim 18 as amended recites, *inter alia*, [a] method for interconnecting electrical components *between two substrates* . . . comprising: disposing a first conductive transmission element . . . *on a first substrate*, . . . ; disposing a second conductive transmission element . . . *on a second substrate*, . . . Applicant respectfully submits that WHITE does not teach the aforementioned method steps.

As already discussed above, as best understood WHITE teaches a solid state amplifier which utilizes a pair of tapered transmission lines; however, the WHITE amplifier device is formed on a single dielectric substrate 12. Moreover, in WHITE, there appears to be no teachings or suggestions that the WHITE amplifier is intended to be used as an interconnect between substrates.

On the other hand, Applicant's invention recited in independent Claim 18 is a device which is utilized as an interconnect for communicating electrical signals, such as microwaves, between substrates 20, 22. Otherwise, there is no reason to use Applicant's distributed interconnect invention on a single substrate considering that the bondwires tend to be subject to unwanted inductance as was mentioned in the Background Section of the subject application as a disadvantage with other prior art solutions.

Since WHITE fails to disclose the above-noted features of the present invention, Applicant submits that WHITE fails to disclose each and every recited feature of the present invention as recited in independent Claim 18.

Accordingly, Applicant respectfully submits that the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b) and that the rejection of Claim 18 is improper and should be withdrawn.

Further, Applicant submits that Claims 19-21 are allowable at least for the reason that these claims depend from allowable independent Claim 1 and because these claims recite additional features that further define the present invention.

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of dependant Claims 19-21 under 35 U.S.C. § 102(b) and indicate that these claims are allowable.

***Traversal of Rejection under 35 U.S.C. §103(a)***

Applicant respectfully traverses the rejection of Claims 6-8 and 22-24 under 35 U.S.C. § 103(a) as being unpatentable over WHITE in view of U.S. Patent No. 4,092,616 to Osterwalder [hereinafter "OSTERWALDER"] and in view of Applicant's Admitted Prior Art [see Fig. 1; hereinafter "AAPA"].

The Examiner submits that WHITE teaches an interconnection having tapered stepped lines as described above. However, the Examiner then states that WHITE does not explicitly teach that the two transmission lines are on two substrates along edges with a gap in between (Claims 6, 22) with the interconnect element bondwires spanning the gap (Claims 7, 23). The Examiner further submits that OSTERWALDER teaches a similar interconnect structure to WHITE and teaches using separate substrates for the two transmission lines (e.g. see Col. 2, lines 40-46). The Examiner then submits that the AAPA teaches providing interconnections along the edge of the substrates with the wires across the gap. Next, the Examiner submits that it would have been obvious to one of ordinary skill in the art to have provided the two WHITE transmission lines on separate substrates (instead of a single substrate) such as taught by OSTERWALDER and having the lines along the edge interconnected with bondwires across the gap such as taught by AAPA, because it would have been a mere selection of a well-known art-recognized equivalent/alternative

interconnection means between the two transmission lines while providing the advantage of multiple substrates for providing more mounting space for other circuit components when needed.

Applicant's Dependent Claims 6-7

As amended Applicant's dependent Claim 6 (including intervening Claims 1 and 3 as amended) recites, *inter alia*, . . . wherein the impedance characteristic of said first and second conductive elements increases in a *linear manner* . . . .

Applicant submits that WHITE, OSTERWALDER and AAPA, whether considered individually or in proper combination, still do not appear to teach the aforementioned feature. In particular, none of the aforementioned references teach or suggest, *inter alia*, the first and second traces having an impedance characteristic that *linearly increases*. Instead, both WHITE and OSTERWALDER only teach transmission elements in which the impedance increases in steps.

For the foregoing reasons, and because neither WHITE, OSTERWALDER and AAPA disclose or suggest the aforementioned features, Applicant submits that no proper combination of these references can render unpatentable the combination of features recited in at least dependent Claim 6 as now amended.

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of dependent Claim 6 under 35 U.S.C. § 103(a) and indicate that this claim is allowable.

Furthermore, for the foregoing reasons, Applicant submits that dependent Claim 7 is allowable at least for the reason that it depends from allowable dependent Claim 6 and because dependent Claim 7 recites additional features that further define the present invention.

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of dependent Claim 7 under 35 U.S.C. § 103(a) and indicate that this claim is allowable.

Applicant's Dependent Claims 22-23

As amended Applicant's dependent Claim 22 (including intervening Claims 18 and 20) recites, *inter alia*, . . . . increasing the impedance characteristic of the first and second conductive elements in a *linear manner* . . . .

Applicant submits that WHITE, OSTERWALDER and AAPA, whether considered individually or in proper combination, still do not appear to teach the aforementioned features. In particular, none of the aforementioned references teach or suggest, *inter alia*, the first and second traces having an impedance characteristic that *linearly increases*. Instead, both WHITE and OSTERWALDER only teach transmission elements in which the impedance increases in steps.

For the foregoing reasons, and because neither WHITE, OSTERWALDER is AAPA disclose or suggest the aforementioned features, Applicant submits that no proper combination of these references can render unpatentable the combination of features recited in at least dependent Claim 22 as now amended.

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of dependent Claim 22 under 35 U.S.C. § 103(a) and indicate that this claim is allowable.

Furthermore, for the foregoing reasons, Applicant submits that dependent Claim 23 is allowable at least for the reason that it depends from allowable dependent Claim 22 and because dependent Claim 23 recites additional features that further define the present invention.

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of dependent Claim 23 under 35 U.S.C. § 103(a) and indicate that this claim is allowable.

***Application is Allowable***

Applicant respectfully submits that each and every pending claim of the present application meets the requirements for patentability, and respectfully requests the Examiner to indicate the allowance of such claims.

CONCLUSION

Applicant respectfully submits that each and every pending claim of the present application meets the requirements for patentability under 35 U.S.C. §§ 102 and 103, and respectfully requests that the Examiner indicate the allowance of such claims.

In view of the foregoing, it is submitted that none of the references of record anticipate or render obvious the Applicant's invention as recited in Claims 1-7, 18-19, 21-23 and 34-45. The applied references of record have been discussed and distinguished, while claimed features of the present invention have been pointed out.

Further, any amendments to the claims which have been made in this response and which have not been specifically noted to overcome a rejection based upon prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Accordingly, reconsideration of the outstanding Office Action and allowance of the present application and all the claims therein is respectfully requested and now believed to be appropriate.

If any additional fee is required, please charge Deposit Account Number 19-4330.

Respectfully submitted,

Date: June 23, 2005 By: \_\_\_\_\_

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